

State of Hawaii's Business and Technology Transformation Briefing for HICTA

Sanjeev "Sonny" Bhagowalia CIO, State of Hawaii August 20, 2013





Dilbert



FINE. I'M OVERWORKED
AND UNDERPAID. I HATE
MY CO-WORKERS, I DON'T
HAVE THE RESOURCES
TO DO MY JOB, AND
WE HAVE NO CLEAR
STRATEGY.









Source: Scott Adams, http://www.dilbert.com





Agenda

What Problem(s) Are we trying to Solve?

Phase A/B – Organize and Plan (FY 2012-2013)

Phase 1 – Implementation (FY 2014-2015)

The Road Ahead – How Can You Help?





What Problem(s) Are We Trying to Solve?





Governor's Challenge* of Transforming Government was an Opportunity...



*CIO Hire July 2011

Challenge

State of Hawaii is up to 30+ years "behind-the-times" in many business processes and IT/IRM capabilities (when compared to leading states) with major fragmentation of policy, organization, process, and technology

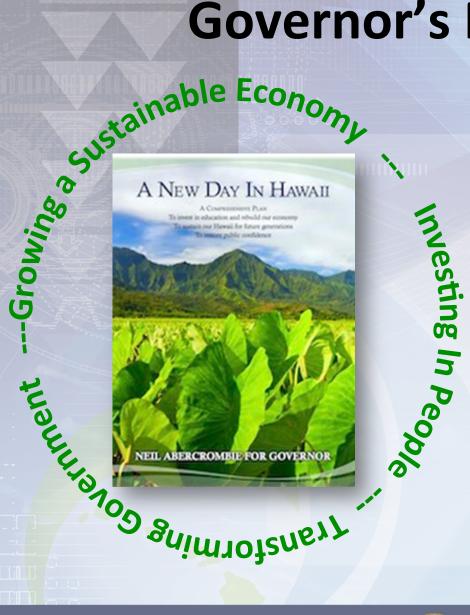
Opportunity

- Use CIO Best practices, a collaborative
 Aloha spirit and a blueprint for change to
 transform and leapfrog the State of Hawai'i
 into the 21st century
- Help Hawaii become one of the best digital states in the U.S. within the next 10 years





Governor's New Day Vision



✓ GROWING A SUSTAINABLE ECONOMY

- New Day Work Projects
- Renewable Energy
- Food Security
- Innovation Economy
- Improvements on Public Lands
- Environmental Stewardship
- Culture, Arts, Creative Industries

✓ INVESTING IN PEOPLE

- Early Childhood
- Education and Workforce Development
- Healthcare Transformation
- Safety Net, Homelessness, Public Safety
- Housing

✓ TRANSFORMING GOVERNMENT

- Information Technology
- Fiscal Management
- Operations Management
- Customer Service
- Civil Defense and Security

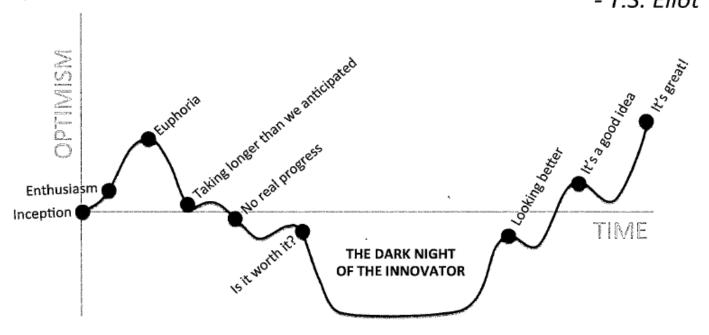




Transformation and Change isn't Easy

The Path of Innovation

Between the idea and the reality falls the shadow - T.S. Eliot



Source: Jeff Mohr, HCF





Phase A/B - Organize and Plan (Fiscal Years 2012-2013)





CIO Role, Responsibility and Authority



Source: http://www.cio.gov



Source: http://oimt.hawaii.gov





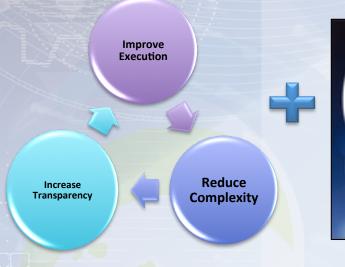


3-Dimensional Transformation

Business

Technology

Governance













Phase A - "As-Is" Environment (September 2011)

1) Baseline Report



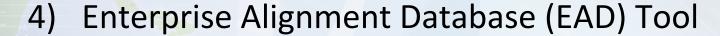
Items 1-3 released in an open, transparent manner to the public

2) Benchmarking Report





3) Data Center Assessment

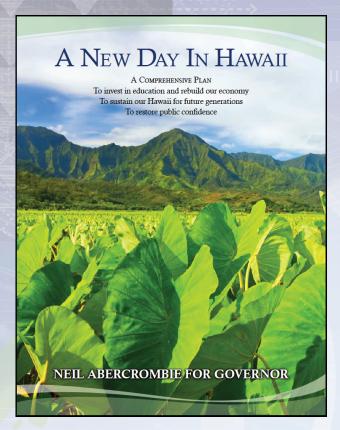




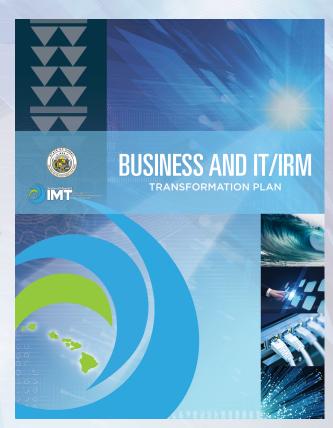




Phase B – "To Be" Vision and Bridging the Gap (Completed July, 2012 – Published October 2012)







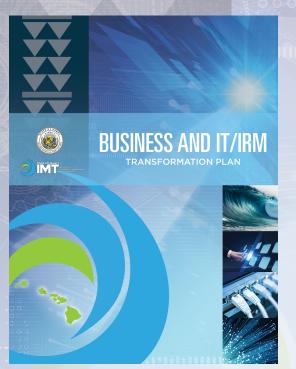
- GROWING A SUSTAINABLE ECONOMY
- INVESTING IN PEOPLE
- ✓ TRANSFORMING GOVERNMENT

http://www.hawaii.gov/oimthtp://oimt.hawaii.gov





A Comprehensive Business and Technology Transformation Plan



http://www.hawaii.gov/oimt http://oimt.hawaii.gov

THE FEDERAL 100

Award Winner 2013

- Transforming an environment plagued by 30 years of under-investment
- A Comprehensive Transformation Plan
 - 20 Plans with 1,432 Pages
 - 7 phases over 12 years
 - 3 Key Strategies and 10 Programs
- We are executing the Plan, which:
 - Reduces overall number of IT systems
 - Reallocates % of the IT workforce to better serve Departments' missions
 - Streamlines Business and IT operations
 - Increases IT service capabilities, reliability and security
 - Reduces ongoing IT costs
 - Improves Government Transparency

Outcome: Faster, Better and Easier Access to Government Information and Services – Anywhere, Anytime on Any Device





The State of Hawai'i



\$11 B State (~30% Federal) – 1.4% IT

People

1.4 M residents - 41K State employees - 1.8% IT

Organization

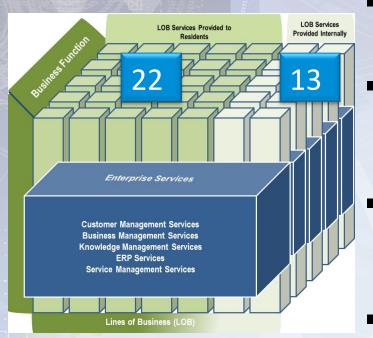
18 Departments, 108 Attached Agencies, and 162 Boards & Commissions; de-centralized IT

Business

35 Lines of Business; 220 Business Services; 100's of Complex, Manual, Silo, Paper Processes

Technology

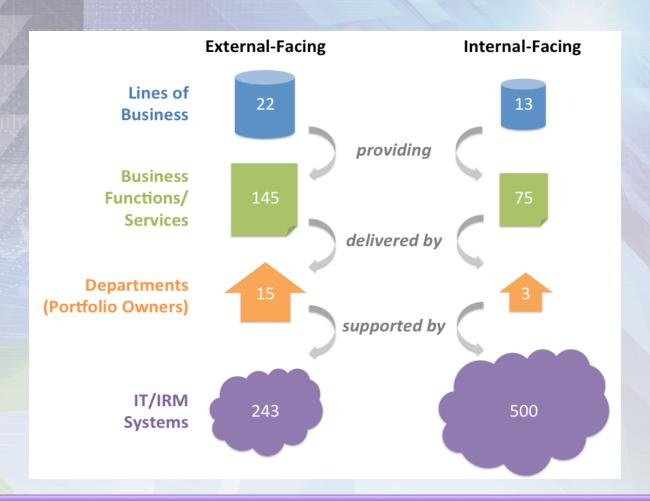
Up to 30 years old; 743 fragmented IT systems; No interoperability, No Disaster Recovery etc.







Legacy Business & IT/IRM Environment



Our Legacy Environment illustrates our Current Fragmentation





A Value Chain for Hawai'i

Economic Development, Commerce & Consumer Affairs Services Delivered Externally Human Services, Workforce Management Defense, Homeland Security, Disaster Management, Law Enforcement Environmental Management, Public Health, Child Support by LOBs Land & Natural Resources, Hawaiian Home Lands Correctional/Public Safety, Criminal Justice, Juvenile Justice, Legal Transportation Education, Higher Education, Public Libraries Agriculture **Grants Management**

 Value To Citizens

Business Outcomes Value to **Business Partners**

Value to Federal Agencies and Other **Funding Providers**

A New Day In Have Investing In People A South Manual Superior Manual

13

22

Services Delivered to Other LOBs Procurement, Assel

Policy, Controls & Oversight Legislative Relations

Information Technology

Logistics, General Services Planning & Resource

Public Affairs



Our Future Vision is a Fully Digital State

through one portal my.hawaii.gov

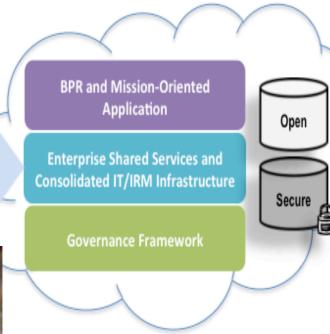


have access to the right information

Residents, State Employees, Government and Business Partners



on any device, securely and reliably



for any mission,

at any time





Three Key Strategies

1

2

3



Re-engineer
Business
Processes and
Applications for
On-line Delivery



Modernize and
Consolidate
Technology
Infrastructure

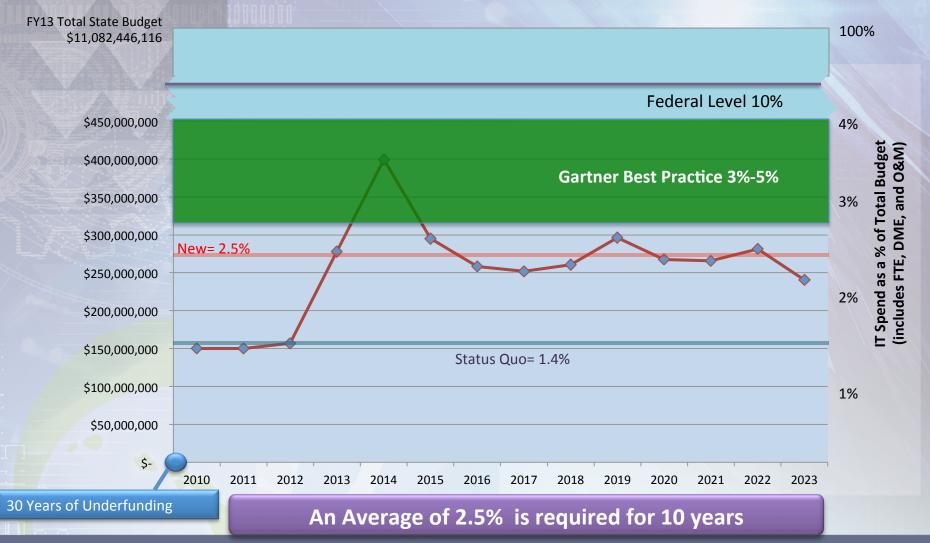


Establish
Oversight,
Management,
and
Transparency
of Enterprise





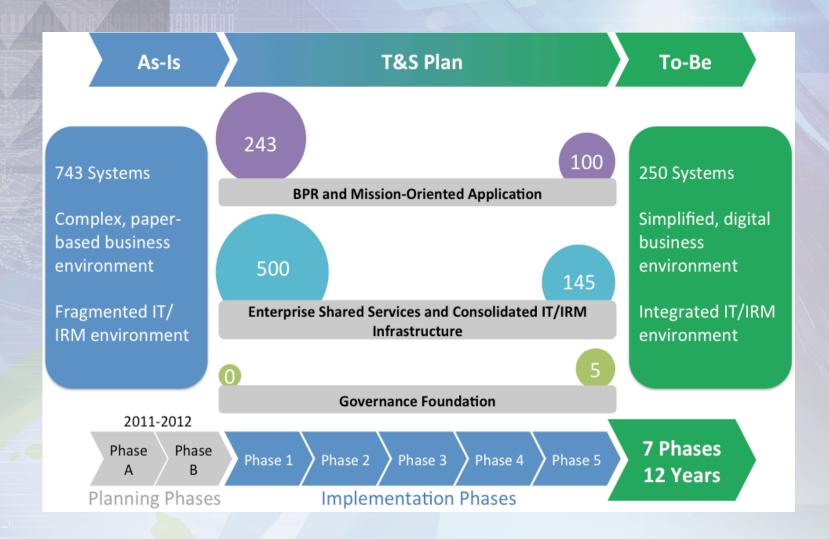
How Much Will the Transformation Cost?







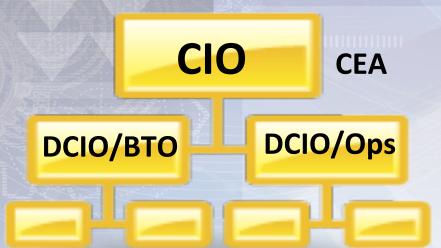
How Long Will the Transformation Take?







OIMT Organization



Business
Transformation;
Program
Management

IT/IRM Operations

CIO

 Leads the OIMT best practice organization to execute the Business and IT Transformation Plan

DCIO/BTO

 Enables the Departments to efficiently transform and execute their mission, goals, and objectives through new enterprise Business and IT/IRM Programs

DCIO/Operations

 Executes new Enterprise IT/IRM shared services and improves legacy IT/IRM operations efficiently across enterprise

Chief Enterprise Architect (CEA)

Governance





Our "Team Hawaii" Core Values and Approach Provides Confidence



- ALOHA SPIRIT
- UNITY OF PURPOSE WITH TRANSPARENCY
- COLLABORATIVE TEAMWORK
- DISCIPLINED EFFORT
- URGENCY IN ACTION
- EXCELLENCE IN WORK
- MEASURABLE PERFORMANCE AND RELIABLE OUTCOMES
- INNOVATIVE SOLUTIONS



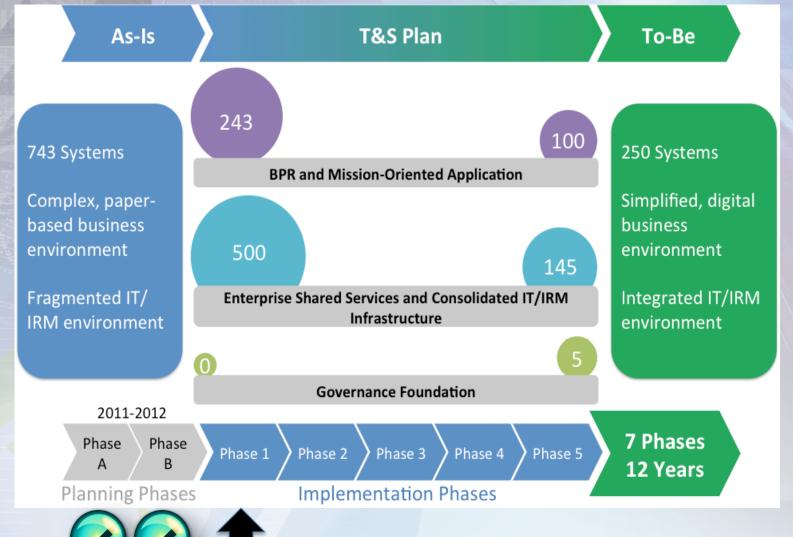


Phase 1 - Implementation (Fiscal Year 2014-2015)





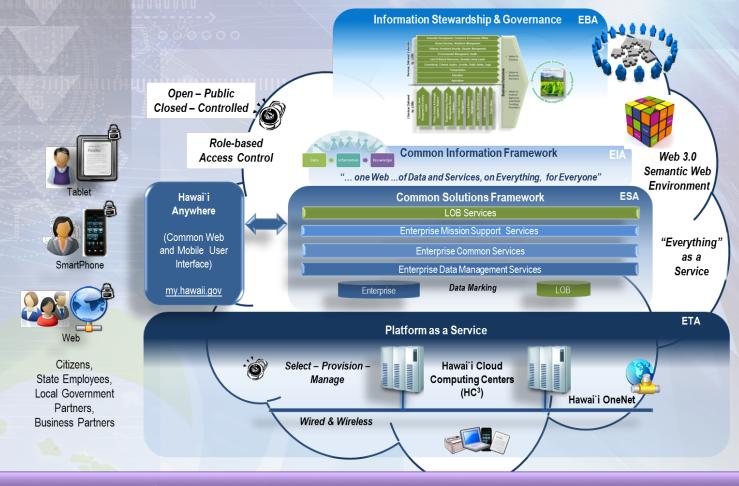
The Implementation Plan is Underway







Our Vision is Guiding the Implementation Plan Through 3 Strategies and 10 Programs



Information available for any mission on any device, anywhere, anytime securely and reliably





Top 10 Enterprise Programs

#	Strategy	Programs	Solutions
Г	Re-engineer Business Processes	Tax Systems Modernization (TSM)	Streamline and modernize tax processing end-to-end across enterprise
		Health IT (HIT)	A more effective, efficient, and patient-focused healthcare system
1		Enterprise Resource Planning (ERP)	Business efficiency, information analysis, and technology modernization for Seven (7) core functions
		Business Process Re- engineering (BPR)	Re-engineer business processes of legacy mission applications to be delivered through one portal – http://my.hawaii.gov
		Open Government	Rapid, agile development of mission-focused applications in a modular, open-source environment, mobile apps, and open government data (e.g., Data.Hawaii.gov)
*		Infrastructure	Consolidate Networking and Computing Infrastructure: One Net - Enterprise Services Network Serving entire State with guaranteed service levels; Adaptive Computing Environment (ACE) – Desktop to mobile, technology refresh cycle; Shared Service Centers provide services, storage, and computing via private; Mission Applications
2	Modernize Technology Infrastructure	Enterprise Shared Services	E-mail and Directory, Content and Document Management, Geographic Information Systems, Collaboration, and other services provided centrally
	imastructure	Security & Privacy	Identity, Credential, and Access Management, Single Sign-on, Role-based Permissions and Privacy protections
		Hawaii Broadband Initiative (HBI)	All Hawai'i residents with ultra-high-speed, affordable gigabit broadband services by 2018
3	Establish Enterprise Management, Oversight, and Transparency	Governance	Establish enterprise Policies and life-cycle management processes, Capital Planning and Investment Control (CPIC)/Portfolio Management (PfM), Enterprise Architecture (EA), and Performance Dashboards





Enterprise Top 10 Program Portfolio











http://oimt.hawaii.gov/projects/





Strategy #1 Business Transformation

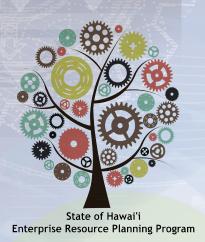
DCIO/BTO Randy Baldemor



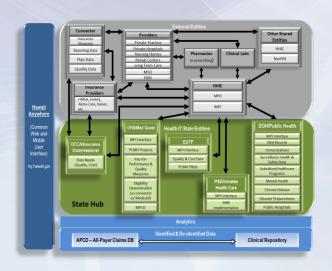


Business Transformation

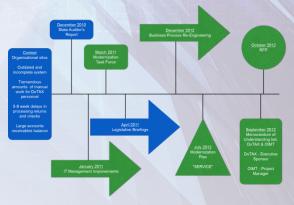
ERP



Health IT (HIT)



Tax Systems
Modernization
(TSM)

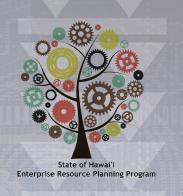




+ Business Process Reengineering







Enterprise Resource Planning (ERP)

The State of Hawaii is planning to acquire an Enterprise Resource Planning (ERP) solution is "a single system used to integrate data of an organization, including planning, financials, manufacturing, human resources, payroll, and sales."

An Enterprise Resource Planning (ERP) solution that provides:

- An integrated software suite
- A foundational application architecture
- A consistent view of key enterprise financial and resource data
- Embedded 'best practice' business processes
- An upgrade path for future releases

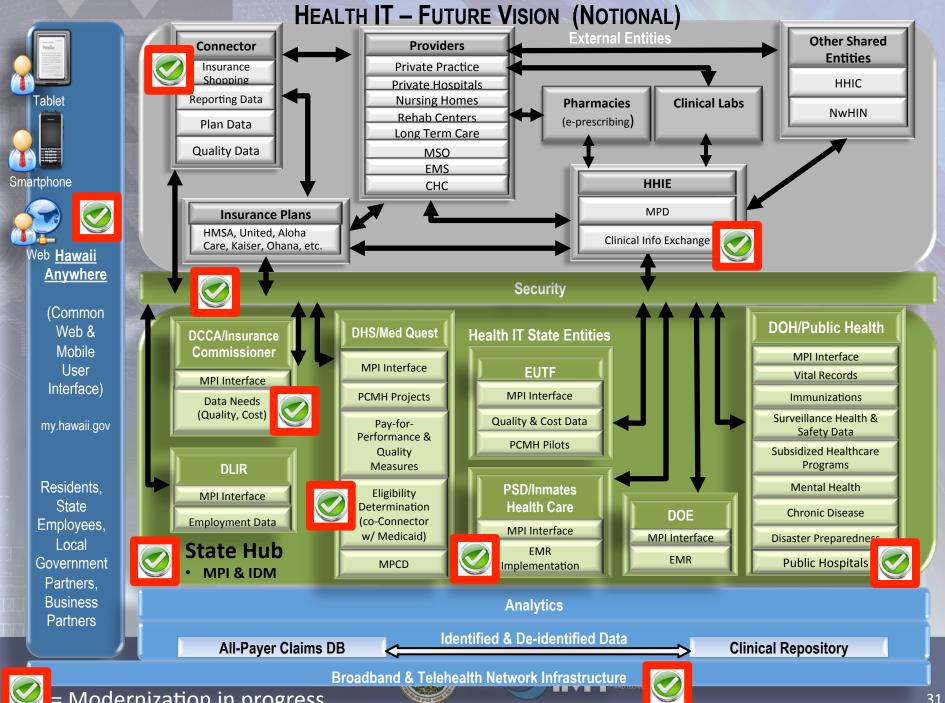
~ RFP Release Planned for 9/2013

The State of Hawaii requires a solution that can meet its requirements in 7 areas:

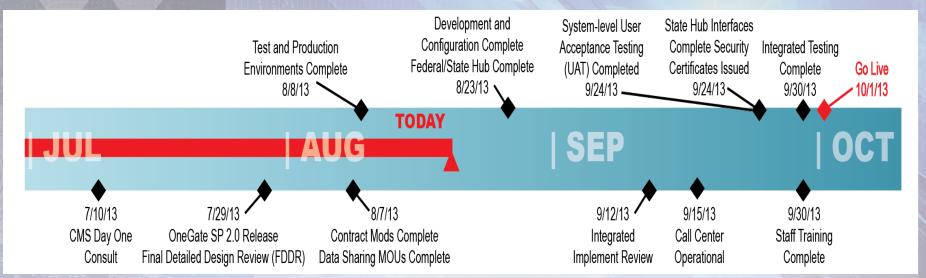








HAWAII HEALTH INSURANCE EXCHANGE (HHIX)

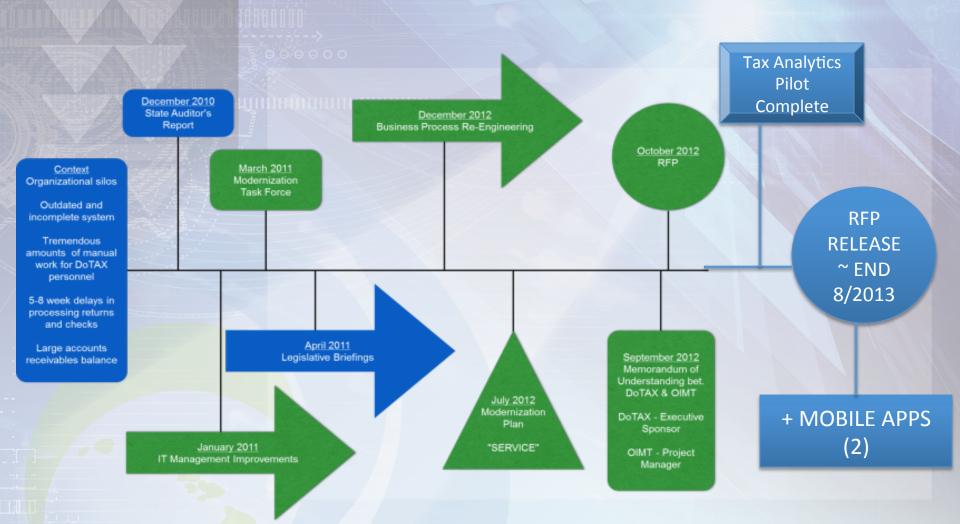


Success Factor	Status
Ability to accept the single, streamlined application or an approved alternative	On track
Ability to achieve successful technical and legal interface with the Federal Data Services Hub to conduct Verifications with federal agencies	State Hub – On Track FDSH – Potentially Delayed from CMS
Ability to assess / determine Insurance Affordability Program (IAP) eligibility based upon MAGI rules	On track
Ability to convert pre-ACA income standards to new MAGI income standards within state systems	Complete





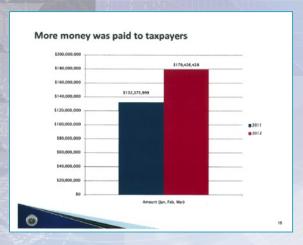
Tax Systems Modernization (TSM)

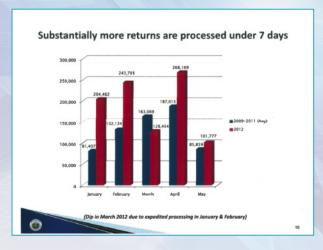






Department of Taxation BPR Project









Incredible results done by DoTAX/DAGS/OIMT Team over 4 months







Employment Employment
To assure all workers full
and equal opportunity to
work, decent working
conditions, fair freatment or
the job, equitable
compensation, and
assistance in work-related
difficulties.

Public Safety To protect the individual and properly from injury and loss caused by criminal actions, accidents, physical hazards, and natural and man-made disasters.





Facilities To facilitate the rapid, safe In facilitate the rapid, safe and economical movement of people and goods into, within and out of State by providing and operating transportation facilities and supporting services.

Learn More >>

To monitor, protect, and

To monitor, protect, and enhance the health of all people in Hawaii by providing leadership in assessment, policy development, and assurance to promote health and well-being, to preserve a clean, healthy and natural environment, and to assure basic healthy



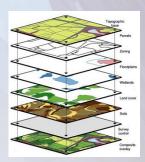












Visualize

Socialize

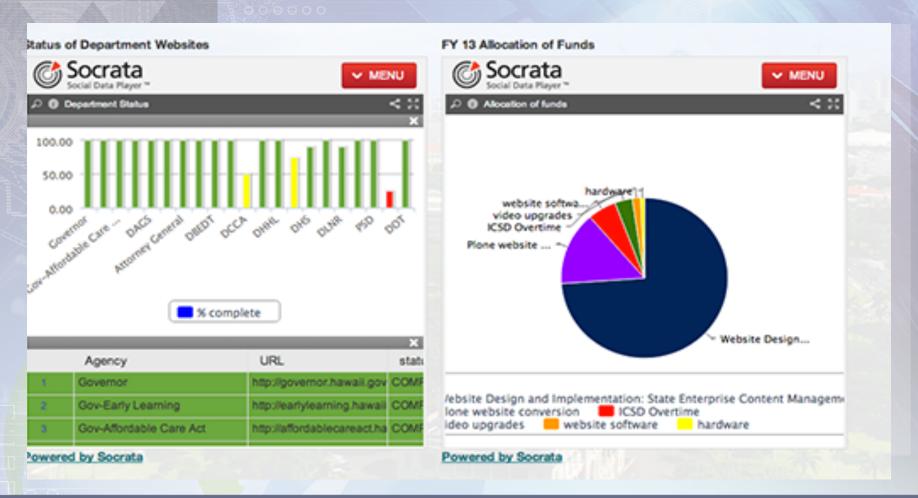
Mobilize

Analyze





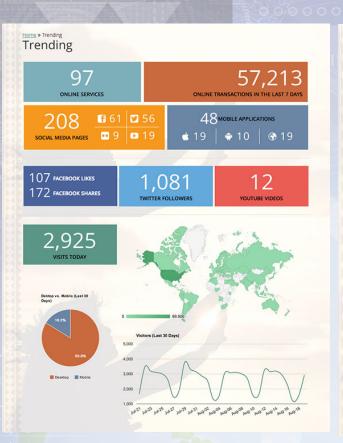
Websites Modernization



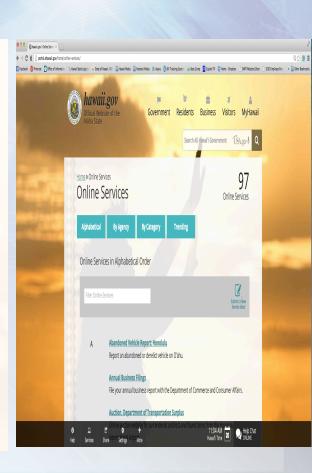




Website Modernization







TRENDING

MOBILE APPS (48)

ON-LINE SERVICES (97)





Transformation Internship Program (TIP)



http://tip.hawaii.gov





Strategy #2 Modernize the Technology Infrastructure

DCIO/CTO Keone Kali





Technology Transformation

Hawaii Broadband Initiative (HBI)

Consolidated Infrastructure

Enterprise Shared Services





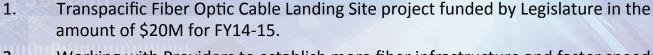








Hawaii Broadband Initiative



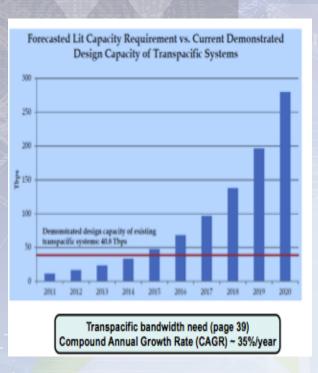
- 2. Working with Providers to establish more fiber infrastructure and faster speeds at affordable prices.
- 3. Working with various consortia to land new Transpacific Fiber Optic Cables in Hawaii.
- 4. Studying the availability of service for wireline and wireless broadband services statewide.
- 5. Planning for future fixed terrestrial fiber transport.
- 6. Planning for future increased bandwidth using microwave interisland backhaul.
- 7. Planning for interisland submarine fiber diversity and increased wavelength capacity.
- 8. Upgrading the State's network to 10Gbps WAN backbone Statewide, increasing backbone speeds to up to 100Gbps by the end of 2015.
- 9. UH BTOP grant will complete this year providing 1Gbps to all Public Schools and Libraries in the State.
- 10. Hawaii State Public Library System (HSPLS) is launching a laptop checkout program to provide residents access to a computer and the Internet.
- 11. DCCA Negotiating more available infrastructure on neighbor islands through Cable Franchise Agreements.

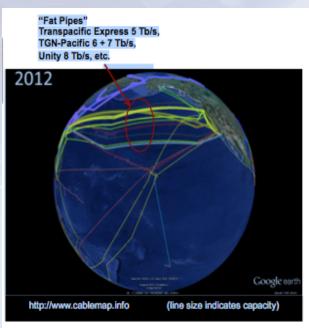


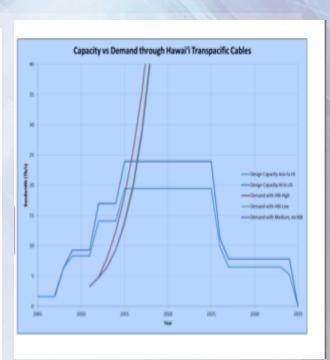




The Importance of Broadband to Hawaii





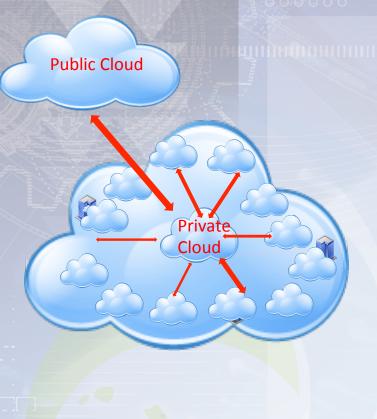


Source: HBI – Trans-Pacific Landing Site Briefing to Legislature FY 2013 – Mike Vitale and Joel Ogren/Johns Hopkins University Advanced Physics Laboratory (JHUAPL)





Infrastructure Projects

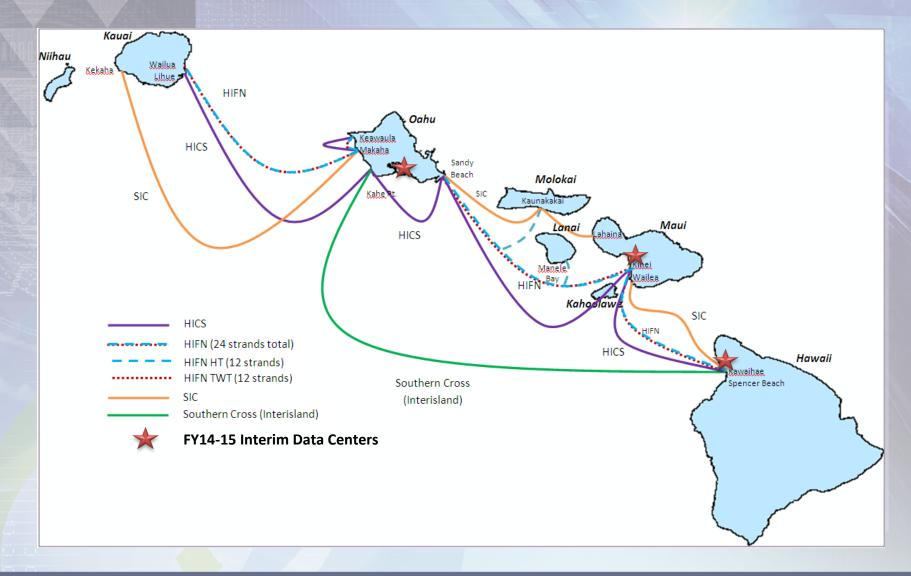


- Data Center Public Private Partnership Study
 - Actively looking for interim Data Center
 - Data Center RFI
- Adaptive Computing Environment
 - Building out server racks in various departments for virtualized cloud
- Network Accomplishments:
 - Network and Security Study
 - OneNet MPLS Network
 - 10Gpbs in Civic Center
 - NGN Redundancy
 - Radio/Microwave Upgrades
 - 2 Additional ISPs





Infrastructure



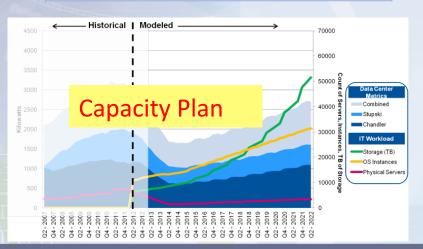


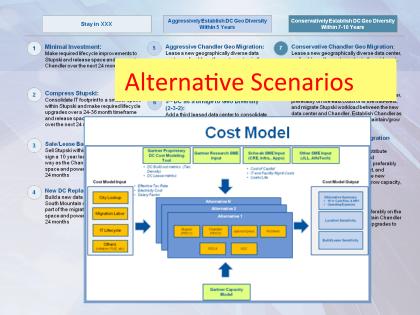


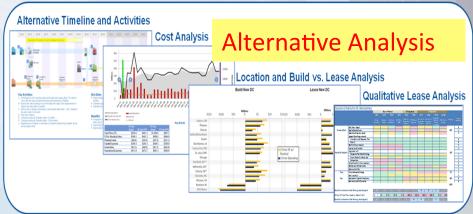
Data Center Study



	Stupski (PDC1):	Chandler (PDC3):	Richfield, OH:	Chicago, IL (o Monros	ptionsXpress): Cermak	Dallas, TX (optionsXpress):
Facility Tier	III	III	II.	II .	II	II
Available kW	3200kVV	1700kVV	135kVV	320kW	34.5kW	50kVV
Percent kW Utilized	60%	71%	78%	38%	18%*	126%
Usable ft²	54,943	25,005	6,500	5,000	800	800
Percent ft² Utilized	43%	54%	70%	60%"	42%	48%
OS Instances	3,690 Physical	2,096 Physical	240 Physical	347 Physical	41 Physical	167 Physical
	3,763 Virtual	1,387 Virtual	700 Virtual	532 Virtual	64 Virtual	153 Virtual
Storage (TB)	3,943	2,375	420	202	21	132
Tape Storage (TB)	5,474	6,537	96	11	NA	NA











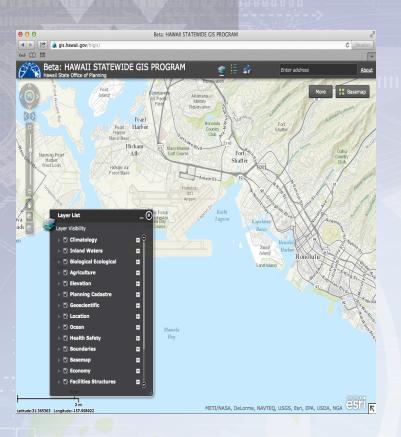
Enterprise Shared Services

- 1. Implementing Government Private Cloud (virtualized) with failover capability.
- 2. Currently negotiating Enterprise License Agreements with multiple software vendors which will result in a savings of 40%-60% on software licensing Statewide.
- 3. All government email accounts will be hosted in the cloud with 50x storage and HIPAA Compliance.
- 4. Implementing full Geospatial Information Services (GIS) and Geoplatform setup.
- 5. Completion of MyHawaii.gov portal for citizen interaction with government.
- 6. Enhancing websites for all Departments and Attached Agencies.





Geographic information Systems (GIS)



- GIS in the ESRI Cloud
- GIS as a Service –
 http://gis.hawaii.gov
- Service Oriented
 Architecture (REST)
- Dynamic and Static Data
- Mobile App Development





Security Case Studies

r	State	Breach	Estimated Costs	
		Most Recent (Dec 2012) of four in last six months:	• \$41,484 in 1 st week	
California	Department of HealthCare Services; 14,000 Social Security Numbers posted to a website	 Estimated \$5M+ in Agency remediation 		
	South Carolina	Three major breaches in last four months across State. (Nov 2012) Department of Revenue: \$3.8m SSN; 650k business tax filings; 400k credit/debit card numbers hacked	• \$340M (breach and remediation)	
Texas		(April 2011) Texas Comptroller: 3.5 million records (name,	•\$1.8M initially	
	Texas	address, SSN, DOB); Compiled report from other agencies posted on publicly accessible site	 Estimated \$5M+ in Agency remediation 	
	III.a.b.	(April 2012) Department of Health: 780k Medicaid patients personally identifiable information stolen/hacked. (Jan 2013)	• \$9.48M (initial breach only)	
	Utan	Third party contractor lost thumb drive containing information for 6k Medicaid recipients	 No cost estimates on most recent 	



A recent study estimates that the average cost of breaches involving less than 100,000 records is \$194 per capita, including costs of detecting and reporting the breach, notifying and assisting consumers, and opportunity costs such as turnover of existing customers. This equates to approximately \$20 million per incident. (Source: Law360)





Security and Privacy

- 1. Currently drafting Security Policies and configuring enterprise security architecture.
- 2. Implementing Unified Directory Services and enterprise identity, credential and access management on the network.
- 3. Upgrading core and WAN firewalls for centralized management of all security interfaces.
- 4. Currently implementing Network and Security Operations Center (NSOC) with continuous monitoring and proactive threat management.
- 5. Will be providing Disaster Recovery Management (backups) for all servers/data on the core network (WAN).
- 6. Establishing network connections to other data centers for data replication, de-duplication, and Disaster Recovery Management.
- 7. Drafting Public safety broadband plan for FirstNet.





Strategy #3 Establish the Management, Oversight, and Transparency of Enterprise IT

CEA/CGO James Lum





Governance

EA, ITIM, Portfolio



Dashboards



Integrated Lifecycle Process







Governance

- Published Business and IT/IRM Transformation Plan
- Enterprise Architecture
 - Enterprise Business Architecture
 - Enterprise Information Architecture
 - Enterprise Solutions Architecture
 - Enterprise Technical Architecture
 - Transition & Sequencing Plan
- Validating and finalizing information on Portfolio,
 Policies and Standards, and Processes





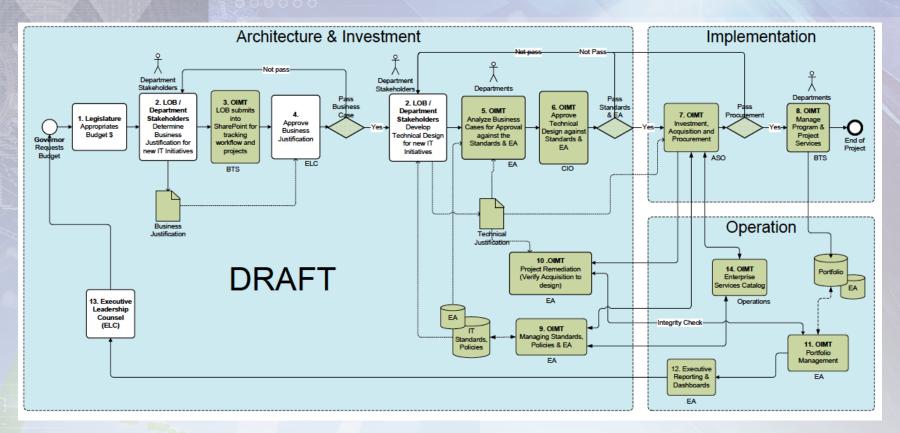
Governance

- Enterprise Portfolio Management
- Integrated Lifecycle Methodology
 - Architect/Invest
 - Implement
 - Operate & Maintain
- We will acquiring a solution that will capture the State's portfolio that will include:
 - Lines of business
 - Business processes
 - Resources
 - Policies
 - Hardware, software
 - Solutions
 - Costs





Governance Integrated Lifecycle Workflow







FY13 Procurements & Acquisitions

Appropriation:

CIP Funds \$15.0 million ERP

(\$8.8 million) Executed

\$6.2 million Committed

General \$5.0 million BPR

\$1.825 million Initiatives & Pilots

\$3.4 million Triage

\$10.2 million Total

Governance, Consolidated Infrastructure, Enterprise Shared Services, Open Government/Mission Apps, Security...Monthly Procurement Reports to Legislature





Legislative Update*

- FY14-15 Budget
 - FY14: \$19.5M General Funds + \$30M CIP Funds
 - FY15: \$15M General Funds + \$30M CIP Funds
 - Creation of \$25 million U Fund
 - 32 New Staff Positions (Total = 39)
- General Fund and CIP Allocation Highlights (FY 14)
 - Business
 - \$3.9 M BPR; \$ 24 M ERP (CIP)
 - Technology
 - \$6 M Security; \$2.7M Enterprise Infrastructure; \$2.2M Enterprise Shared Services; \$6 M Data Center (CIP)
 - Governance
 - \$2M Enterprise Architecture; \$125,000 Governance

*(Public Information)





Legislative Update

- SB1000 ACT 021 CIO or Designee as Chair of Access Hawaii Committee
- SB1001 ACT 022 CIO replaces Comptroller as member of the E-911 Board
- SB722 SD2 HD1 CD1 ACT 110 CIO to work with DAGS to coordinate inventory of public buildings, facilities, and sites on public trust lands. Requires state agencies to provide inventory information by December 1, 2013. \$250,000 appropriation.
- HB632 HD2 SD2 CD1- Act 263 Open Data Bill
- HB635 HD2 S1 CD1 Act 264 Expedited permitting process for broadband providers.
- SB1003 SD2 HD1 CD1 Act 265- CIO as authority over cyber security.
- HR170 Task force to study and make recommendations regarding the creation of a crowdfunding program.
- HCR47 Extends the Prompt Payment Taskforce through December 2013.





2013 Digital Hawaii Government Summit

- Tentatively scheduled for Thursday, Nov. 21,
 2013 at the Hilton Hawaiian Village
- Organized by Center for Digital Government
- Feedback and suggestions for Topics etc.
 welcome email oimt@hawaii.gov



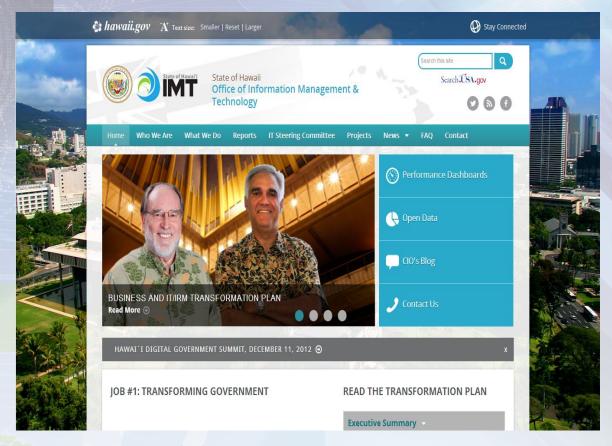
How Can You Help?

- Provide feedback
- Support legislative efforts
- Share best practices





Hawaii's Transformation Journey is Well on its Way! Please Join Us and Help the Great State of Hawaii...



http://oimt.hawaii.gov









